## Obituary Notice of Edward Rhoads, M. D. BY HENRY HARTSHORNE, M. D.

(Read before the American Philosophical Society, Phila. Oct. 6, 1871.)

Of those recently deceased, members of a profession which has contributed a large share of workers to the different fields of biological science, few have given greater promise, and not many among us have attained to better performance in a short career, than Edward Rhoads. Unfavorable for the full appreciation of his work, except by those with whom he was closely associated, has been the fact that much of it has been unrecorded; being the daily labor of the practitioner and teacher of medicine. But it is fitting that this Society, whose pursuits and membership are not narrowly limited, should at least briefly record its recognition of such high ability and character.

Edward Rhoads was born in Philadelphia, September 29, 1841. After a good preliminary training, in which an early love of natural science displayed itself, he entered Haverford College in 1855; and was graduated there, at the head of his class, in 1859. The rural situation of the college afforded him an opportunity for the study of Botany, in which he became well versed while a sudent. Shortly after leaving college, an attack of rheumatic fever, involving the heart, began those inroads upon his constitution, the repetition of which afterwards abridged his life. In the fall of 1860 he commenced the study of medicine, and obtained the degree of Doctor of Medicine at the University of Pennsylvania, in 1863. He was then elected, after a competitive examination, Resident Physician in the Philadelphia Hospital, West Philadelphia. This was followed, in 1864, by his appointment as Resident Physician in the Pennsylvania Hospital. In the midst of his arduous duties there, performed with distinguished success and with satisfaction to all, he was again affected with articular rheumatism, which renewed seriously the disorganizing disease of his heart.

On recovering from this attack, he visited Europe, in 1865, being absent eight months. In 1866, he was appointed Visiting Physician to the Philadelphia Hospital; where his professional talent, enthusiam and knowledge, and his capacity as a clinical teacher, found free scope for development and utility. He was at the same time assiduously engaged in private medical teaching, as an examiner in connection with the courses of the University of Pennsylvania, and in giving lectures upon medical chemistry and connected subjects. In 1870 the faculty of the University appointed him its lecturer on Physical Diagnosis. His first course of lectures was interrupted by illness, which prevented his ever resuming the duties of a public instructor.

In the same year, a number of gentlemen proposing to establish a new medical journal,—The Philadelphia Medical Times,—its editorship was unanimously offered to Dr. Rhoads. This duty, which enlisted all his zeal, and would have illustrated admirably his professional learning and

tact, he was obliged to forego on account of his failure in health, which, after great suffering for several months, ended his life January 15, 1871.

In private practice, Dr. Rhoads was rapidly gaining the confidence and success which his skill and acquirement deserved; as well as the warm and grateful attachment of many families, -which remains in commemoration of his virtues, more faithful than any eulogy, and more enduring than any monument. He was elected to membership, besides the Philosophical Society, in the Philadelphia College of Physicians, of which he was Recording Secretary, the Academy of Natural Sciences, and the Pathological Society. To the proceedings of the latter he contributed a number of papers. He wrote for the American Journal of the Medical Sciences several reviews, showing a quick critical apprehension, a large acquaintance with medical science and literature, and an excellent command of language. He assisted Dr. J. F. Meigs in the preparation of an elaborate paper, published in the first volume of the Pennsylvania Hospital Reports, 1868, on "The Morphological Changes of the Blood in Malarial Fever." With Dr. W. Pepper, he contributed to the same volume the results of an extended inquiry into the "Fluorescence of the Tissues of the Human Body, especially in connection with Malarial disease and the action of Quinia." The scientific spirit which animated all his professional labors, and which he brought to the investigation of the great problems of Pathology and therapeutics, thus elevating the vocation of the physician far above routine, was well exemplified in this paper. Its preparation was suggested by the remarkable observation of Bence Jones, by whom a fluorescence resembling closely that of a solution of quinine was found to occur in solutions of the tissues of animals which had taken none of that substance. A peculiar fluorescent organic principle was here inferred to be a normal constituent of the animal body; and to this Bence Jones applied the name of "Animal Quinoidine." It was not an irrational hypothesis, that the systemic effects of the malarial poison may be attended by an injurious deficiency of this material; and that quinine, or the other extractives of Peruvian bark, may be remedial for the disease, by supplying the system with its equivalent.

Drs. Rhoads and Pepper undertook first, to ascertain whether, by chemical and spectroscopic analysis, there could be shown to be a marked diminution in the amount of animal quinoidine in the body under the influence of malarial disease. They also gave attention to the effect upon the animal fluorescence produced by the treatment of the attack by sulphate of cinchonia. The interesting result was arrived at by a series of careful and exact determinations, that there is, uniformly, a close connection between malarial disease and the diminution of "animal quinoidine;" and that this connection is apparent, not only in the presence of a fully developed paroxysm of fever, but also when the system is more insidiously, though often very seriously, affected by the morbid cause.

The same exact inquiry into evidence, with the aim to discover and establish truth, was applied by Dr. Rhoads in his consideration, both theo-

retical and practical, of the highest topics, not only of science, but of philosophy. Contented to accept no truth upon the evidence of mere tradition or human authority, his opinions upon religious subjects, being those held by the Society of Friends of which he was a member, were the result of deliberate and strong conviction. His fine critical faculty was brought to bear upon the recent Biblical and anti-Biblical controversies, represented, upon the one side, in different modes, by Strauss, Bauer, Comte, Renan and Buckle. In several essays, prepared for special occasions, only one of which, however, has been published, he displayed a calm mastery of these topics, an amount of knowledge and force of argument, such as might be looked for rather in a professed theologian than in an active member of the medical profession.

With all who knew Dr. Edward Rhoads, however, his intellectual endowments, though great, were always perceived to be subordinated to moral qualities more rare and admirable. From early youth, purity of life, unselfishness, refinement and elevation of mind, were his marked characteristics. Few examples so spotless are met with in any profession or sphere of life. In the large assembly which met at his funeral, words spoken by several who knew him well, and whose standard of character was high, were such as might fulfil the aspirations of the most saintly of men, and which very few, indeed, could deserve.

## Stated Meeting, Oct. 20, 1871.

Present, nine members.

Curator, Dr. Carson, in the chair.

A letter, acknowledging receipt of No. 86 proceedings, was received from the University of the City of New York.

Donations for the Library were received from the Revue Politique; the Astronomer Royal of England; the Editors of Nature; the R. Institute of Cornwall; Thomas P. James, Esq; the Editor of the Old and New; the American Chemist; American Journal of Medical Sciences, and Medical News and Library.

A letter was read from Professor Cope to the Secretary, dated Fort Wallace, Kansas, 10th month 9, 1871, giving a preliminary report of his expedition into the Valley of the